THE INVENTION CLAIMED IS:

1.   A method for analyzing a semiconductor device comprising:

testing a semiconductor device to produce first data and second data;

applying a clustering method to the first data to create a clustered first data; and

5   correlating the clustered first data with the second data to determine analyzed data.

2.   The method of claim 1 wherein the clustering method is spatial signature analysis.

3.   The method of claim 1 wherein the clustering method is K-means clustering.

4.   The method of claim 1 wherein the first data is selected from a group

10   consisting of IV curves and V_t distributions.

5.   The method of claim 1 wherein the analyzed data is selected from a group consisting of wafer mapping, commonality, or correlation.

6.   A method for analyzing a semiconductor device comprising:

testing a semiconductor device to produce physical data and electrical data;

15   applying a clustering method to the electrical data to create clustered electrical data; and

correclating the clustered eletrical data with the physical data to determine analyzed data.

7.   The method of claim 6 wherein the clustering method is spatial signature

20   analysis.

8.   The method of claim 6 wherein the clustering method is K-means clustering.

9.   The method of claim 6 wherein the process data is selected from a group consisting of IV curves and V_t distributions.

10.   The method of claim 6 wherein the analyzed data is selected from a group

25   consisting of wafer mapping, commonality, or correlation.

11.   Apparatus for analyzing a semiconductor device, comprising:

circuitry for testing a semiconductor device, to produce first data and second data;

circuitry for applying a clustering method to the first data to create a clustered first data; and

circuitry for correlating the clsutered first data with the second data to determine analyzed data.

12.   The apparatus of claim 11 wherein the clustering method is spatial signature analysis.

13.   The apparatus of claim 11 wherein the clustering method is K-means clustering.

14.   The apparatus of claim 11 wherein the first data is selected from a group consisting of IV curves and V_t distributions.

15.   The apparatus of claim 11 wherein the analyzed data is selected from a group consisting of wafer mapping, commonality, or correlation.

16.   Apparatus for analyzing a semiconductor device, comprising:

circuitry for testing a semiconductor device to produce physical data and electrical data;

circuitry for applying a clustering method to the electrical data to create clustered electrical data; and

circuitry for correclating the clustered eletrical data with the physical data to determine analyzed data.

17.   The apparatus of claim 16 wherein the clustering method is spatial signature analysis.

18.   The apparatus of claim 16 wherein the clustering method is K-means clustering.

19.   The apparatus of claim 16 wherein the process data is selected from a group consisting of IV curves and V_t distributions.

20.   The apparatus of claim 16 wherein the analyzed data is selected from a group consisting of wafer mapping, commonality, or correlation.